

Remarks/Arguments

Claims 17-23, 26-28, 30-40 and 42-50 are pending. Claims 17-22 are withdrawn from consideration. Claims 23, 30-32, 38, 40 and 44 are amended and claim 49 added. The claim amendments and new claim are supported by the original claims. No new matter is added by way of the amended claims or the new claim.

Claim Objections

Misnumbered claim 45 is canceled and rewritten as new claims 49 and 50. Applicants respectfully request that the Examiner withdraw the objection to these claims.

Claim Rejections – 35 U.S.C. §112, first paragraph

Claims 23, 24, 33-37, 39-41 and 43-46 are rejected under 35 U.S.C. §112, first paragraph. The Examiner maintains that these claims fail to comply with the written description requirement. Applicants respectfully disagree. However, to speed up prosecution and without prejudice or disclaimer of the subject matter claimed, applicants have amended claims 23 and 40 so that the compounds recited in these claims are selected from azurin, cytochrome C₅₅₁ or a variant or derivative of these compounds.

Claim 24 is cancelled. Claims 33-37 and 39 now depend from claim 23 or from claims depending from claim 23. Claim 41 is cancelled and claims 43, 44 and 46 and new claims 49 and 50 (corresponding to misnumbered claim 45) now depend from claim 40 or from claims depending from claim 40. Because of the amendments to claims 23 and 40, applicants respectfully request that the Examiner withdraw the rejections under 35 U.S.C. §112, first paragraph.

Claim Rejections – 35 U.S.C. §102

Claims 23, 24, 33-36, 39-41, 43, 45 and 46 are rejected under 35 U.S.C. §102(b) as being anticipated by 5,681,810 (28 October 1997) (“the ’810 patent”). The Examiner equates the diphtheria toxin of the ’810 patent to a cytotoxic factor of the present invention. Again, applicants respectfully disagree. However, as discussed above, applicants have amended claims 23 and 40 so that the compounds recited in these claims are selected from azurin, cytochrome C₅₅₁ or a variant or derivative of these compounds. The other rejected claims depend from either claim 23 or claim 40 and include the limitations of the independent claim. Because of these amendments, applicants respectfully request that that Examiner withdraw the rejection of claims 23, 33-36, 39, 40, 43, 45 and 46 under 35 U.S.C. §102(b).

Claims 23, 33, 34, 37, 39, 40, 41, 43 and 44 are rejected under 35 U.S.C. §102(b) as being anticipated by 5,972,899 (26 October 1999) (“the ’899 patent”). The Examiner equates the Shigella Ipa B toxin of the ’899 patent to a cytotoxic factor of the present invention. Applicants respectfully disagree. However, as discussed above, applicants have amended claims 23 and 40 so that the compounds recited in these claims are selected from azurin, cytochrome C₅₅₁ or variant or derivative of these compounds. The other rejected claims depend from either claim 23 or claim 40 and include the limitations of the independent claim. Because of these amendments, applicants respectfully request that that Examiner withdraw the rejection of claims 23, 33, 34, 37, 39, 40, 43 and 44 under 35 U.S.C §102(b).

Claims 40 and 43 are rejected under 35 USC §102(b) as being anticipated by Zaborina *et al.* (1999, Infection and Immunity, vol. 67, pages 5231-42)(“Zaborina I”). The Examiner equates the ATP-utilizing enzymes of Zaborina I to a cytotoxic factor of the present invention. Applicants

respectfully disagree. However, to speed up prosecution and without prejudice or disclaimer of the subject matter claimed, applicants have amended claim 40 to recite that the cells contacted with azurin, cytochrome C₅₅₁ or a variant or derivative of these compounds are cancer cells. Because of this amendment, applicants respectfully request that the Examiner withdraw the rejection of claims 40 and 43 under 35 U.S.C. §102(b).

Claims 40, 42-44 and 47-49 are rejected under 35 U.S.C. §102(a) as being anticipated by Zaborina *et al.* (2000, Microbiology, vol. 146, pages 2521-30)(“Zaborina II”). Applicants respectfully disagree. However, to speed up prosecution and without prejudice or disclaimer of the subject matter claimed, the Applicants enclose a declaration pursuant to 37 C.F.R. §1.132 stating that, to the extent that any of the subject matter claimed in the present application is described in Zaborina II, such subject matter is the work of inventors Chakrabarty and Zaborina and not that of others. The coauthors listed on Zaborina II worked under the direction and supervision of inventors Chakrabarty and Zaborina regarding any aspects of the invention that relate to the invention. Because of the enclosed declaration, Applicants respectfully request that the examiner withdraw the rejection of claims 40, 42-44 and 47-49 under 35 U.S.C. §102(a).

Claim Rejections – 35 U.S.C. §103

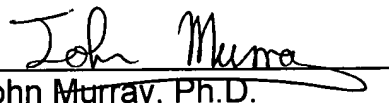
Claims 23, 24 and 26-32 are rejected under 35 U.S.C. §103(a) as being unpatentable over Zaborina II in view of the '899 patent. Applicants have discussed Zaborina II above and submit that Zaborina II is not available as a prior art reference. Furthermore, the '899 patent teaching of the Shigella Ipa B toxin and the ability of this compound to induce apoptosis does not make up for the absence of the teachings of Zaborina II. In particular, the '899 patent does not teach or suggest the use of azurin, cytochrome C₅₅₁, or a variant or derivative of these compounds, to modulate cell death in a patent.

Because of this deficiency, the applicants respectfully request that the Examiner withdraw the rejection of claims 23 and 26-32 under 35 U.S.C. §103(a).

Applicants believe that the amended claims and remarks overcome the Examiner's rejections. The application is therefore in condition for allowance and early notice to this effect is earnestly solicited. If, for any reason, the Examiner is unable to allow the application on the next Office Action and feels that an interview would be helpful to resolve any remaining issues, he is respectfully requested to contact the undersigned attorney at (312) 321-4229.

Respectfully submitted,

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